Solid State Devices, Inc.
14830 Valley View Blvd * La Mirada, Ca 90638
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SFT5001

5 AMPS
125 Volts
High Speed
PNP Transistor

DESIGNER'S DATA SHEET

Part Number / Ordering Information [1/]

SFT5001

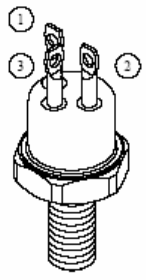
- **Screening** [2/] __ = Not Screened, TX = TX Level, TXV = TXV Level, S = S Level
- **Lead Bend** [3/ 4/] __ = Straight Leads, UB = Up Bend, DB = Down Bend
- **Pin Out Configuration** [5/] __ = Normal, R = Optional
- **Package** [3/] /59 = TO-59, /66 = TO-66, J = TO-257, S.5 = SMD .5

Features:

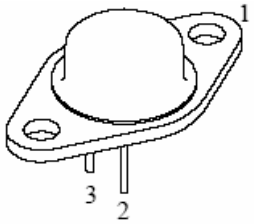
- Radiation Tolerant
- Superior to JEDEC 2N5001 Series
- High Frequency, f_T > 80MHz
- Very Low Saturation
- Fast Switching, 130 ns Max t(on)
- Designed for Complementary Use with SFT3997
- TX, TXV, S-Level Screening Available. Consult Factory.

Maximum Ratings	Symbol	Value	Units
Collector – Emitter Voltage	V_{CEO}	80	**Volts**
Collector – Base Voltage	V_{CBO}	125	**Volts**
Emitter – Base Voltage	V_{EBO}	7	**Volts**
Collector Current	I_C	5	**Amps**
Base Current	I_B	1	**Amps**
Total Power Dissipation @ T_C = 100°C **Derate Above 100°C**	P_D	30 0.3	**Watts** **W/°C**
Operating & Storage Temperature	T_J & T_{STG}	-65 to +200	**°C**
Maximum Thermal Resistance (Junction to Case)	$R_{\theta JC}$	3.33	**°C/W**

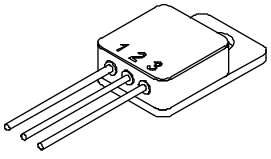
TO-59 (/59)



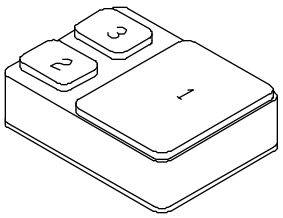
TO-66 (/66)



TO-257 (J)



SMD .5 (S.5)



NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	**DATA SHEET #: TR0099A**	**DOC**

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SFT5001

Electrical Characteristics		Symbol		Min	Max	Units
Collector – Emitter Blocking Voltage *	(I_C = 10 mA)	BV_{CEO}		80	—	**Volts**
Collector – Base Blocking Voltage	(I_C = 20 µA)	BV_{CBO}		125	—	**Volts**
Emitter – Base Blocking Voltage	(I_E = 20 µA)	BV_{EBO}		7	—	**Volts**
Collector Cutoff Current	(V_{CE} = 40 V)	I_{CEO}		—	10	**µA**
Collector Cutoff Current	(V_{CB} = 100 V)	I_{CBO}		—	1.0	**µA**
Emitter Cutoff Current	(V_{EB} = 6 V)	I_{EBO}		—	1.0	**µA**
DC Current Gain *	(I_C = 50 mA, V_{CE} = 5 V) (I_C = 1.0 A, V_{CE} = 5 V) (I_C = 5.0 A, V_{CE} = 5 V)	h_{FE}		50 50 30	— — —	
Collector-Emitter Saturation Voltage *	(I_C = 1.0 A, I_B = 100 mA) (I_C = 5.0 A, I_B = 500 mA)	$V_{CE(SAT)}$		— —	0.5 1.0	**Volts**
Base-Emitter Saturation Voltage *	(I_C = 1.0 A, I_B = 100 mA) (I_C = 5.0 A, I_B = 500 mA)	$V_{BE(SAT)}$		— —	0.9 1.2	**Volts**
Current Gain – Bandwidth Product	V_{CE} = 5 V, I_C = 0.5 A, f = 10 MHz	f_T		80	—	**MHz**
Output Capacitance	V_{CB} = 10 V, I_E = 0 A, f = 1.0 MHz	C_{ob}		—	75	**pF**
Delay Time	(V_{CC} = 20 V, I_C = 1.0 A, $V_{BE(off)}$ = 3.7 V, I_{B1} = I_{B2} = 100 mA, R_L = 20 Ω)	$t_{(on)}$	t_d	—	150	**ns**
Rise Time			t_r	—		
Storage Time		$t_{(off)}$	t_s	—	500	**ns**
Fall Time			t_f	—		

NOTES:

* Pulse Test: Pulse Width = 300µsec, Duty Cycle = 2%

1/ For Ordering Information, Price, and Availability Contact Factory.

2/ Screening per MIL-PRF-19500

3/ For Package Outlines Contact Factory.

4/ Up and Down Bend Configurations are Available for 'J' (TO-257) Packages Only.

5/ Optional Pin Out Configurations are Available for 'J' (TO-257) Packages Only.

6/ Unless Otherwise Specified, All Electrical Characteristics @25ºC.

Available Part Numbers:

SFT5001/59 SFT5001/66 SFT5001J SFT5001JUB SFT5001JDB SFT5001JR SFT5001JRUB SFT5001JRDB SFT5001S.5

PIN ASSIGNMENT (Standard)			
Package	**Collector**	**Emitter**	**Base**
TO-59 (/59)	Pin 1	Pin 2	Pin 3
TO-66 (/66)	Case	Pin 2	Pin 3
TO-257 (J)	Pin 1	Pin 2	Pin 3
SMD .5 (S.5)	Pin 1	Pin 2	Pin 3

PIN ASSIGNMENT (Optional)			
Package	**Collector**	**Emitter**	**Base**
TO-257 (JR)	Pin 2	Pin 3	Pin 1